

Application Serial No. 10/005,052
Reply to Office Action dated February 5, 2007

JUL 05 2007**REMARKS/ARGUMENTS**

Currently, claims 1-3 and 5-48 stand rejected by the Examiner. More specifically, claims 1-3, 5-9 and 16-48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,844,924 to Stanley in view of U.S. Patent No. 4,372,812 to Phillips et al. Additionally, claims 1-3, 5-21, 23-26, 33-34, 35-39, 41 and 48 stand rejected under 35 U.S.C. § 102(e) as being anticipated by WO 02/21936A2 to Monsalve-Gonzalez. Finally, claims 22, 27-32, 40 and 42-47 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Monsalve-Gonzalez. It is respectfully submitted that none of the prior art, either taken singly or in combination, discloses or suggests the present invention as set forth in the present claims.

The present invention is directed to bran having a reduced ferulic acid concentration and an elevated vanillin concentration, as well as a method of producing the same utilizing a mild ozone oxidation treatment. Stanley is concerned with a method of decreasing the color of dietary fiber material by reacting the material with an esterifying agent and then bleaching the fiber material. Stanley notes that typical bleaching agents can be utilized, such as peroxides, chlorites, peracids and ozone. However, the Examiner clearly acknowledges that Stanley does not disclose numerous claimed features of the present invention, including the amount of ozone utilized. Instead, the Examiner cites Phillips et al., stating that it would have been obvious to one skilled in the art to determine the amount of ozone to be used based on the bleaching range in Phillips. However, Phillips et al. is directed to a chlorine free process for bleaching lignocellulosic pulp.

Three requirements must be met to show a prima facie case of obviousness under 35 U.S.C. § 103: 1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; 2) there must be a reasonable

Application Serial No. 10/005,052
Reply to Office Action dated February 5, 2007

expectation of success; and 3) the prior art reference must teach or suggest all of the claim limitations. See M.P.E.P. § 2143. In determining the propriety of the Patent Office case for obviousness, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed substitution, combination, or other modification. See M.P.E.P § 2143.01 (citing *In re Lintner*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (C.C.P.A. 1972).

There is simply no motivation for one of ordinary skill in the art to look to the ozone ranges for bleaching paper pulp in Phillips et al. in order to determine an effective ozone range for decreasing the color of the dietary fiber of Stanley or increasing the native concentration of vanillin in bran as set forth in accordance with the present invention. Instead, Phillips et al. is in a completely different field than both Stanley and the present invention, and there is simply no motivation, suggestion or teaching to combine references from entirely different fields to solve a problem that neither one of them addresses, i.e., the reduction of ferulic acid concentrations and increase of vanillin concentrations in bran. Additionally, there can be no proper expectation of success in the combination of the references. Furthermore, even if the references could be properly combined, the combination would not teach or suggest utilizing a mild ozone oxidation treatment to reduce ferulic acid and increase vanillin in bran.

The Applicant again notes that a reference which performs a step of a claimed process for a different purpose and does not recognize the problem solved in the Applicant's process does not render the process obvious. *Ex parte Wisdom et al.*, 184 USPQ 822 (POBA 1973). The desirability of a mild ozone oxidation treatment to increase the vanillin level and decrease ferulic acid in bran is clearly not addressed in any of the prior art cited by the Examiner. Instead, the Examiner simply states that "reducing ferulic acid and increasing vanillin are an obvious result of the reaction of bran with ozone." See page 3 of the Office Action. The Applicant disagrees. Neither Phillips et al.

Application Serial No. 10/005,052
Reply to Office Action dated February 5, 2007

nor Stanley teach or suggest reducing ferulic acid and increasing vanillin. The fact that different amounts of ozone can be utilized in a process for an entirely different purpose, i.e., bleaching, does not render the process of the current invention obvious. A proper rejection under 35 U.S.C. § 103 cannot be based on hindsight knowledge of the invention under consideration for the sole basis of attempting to meet the recitation of the claims. See *Environmental Designs, Ltd. v. Union Oil Co. of Cal.*, 218 USPQ 865, 870 (1983).

In addition to the arguments mentioned above, the Examiner states that the Applicant has not shown any unexpected result or criticality with the amount claimed. However, the burden of proof only shifts to an Applicant when a prima facie case of obviousness has been established. In the present case, the Examiner has failed to establish such a prima facie case. In general, there is no requirement that a claimed invention attain an "unexpected result" before a conclusion of nonobviousness may be reached. See *Panduit Corp. v. Dennison Mfg. Co.*, 774 F.2d 1082, 227 USPQ 337 (Fed. Cir. 1985), remanded, 475 U.S. 809, 229 USPQ 478 (1986), on remand, 810 F.2d 1561, 1 USPQ2d 1593 (Fed. Cir. 1987), cert. denied, 481 U.S. 1052 (1987). Additionally, even if the critical nature of a component is necessary for patentability, the critical nature of a difference or of a limitation need not necessarily be pointed out in the specification, and it need not be expressly stated to be critical. See *Jennings v. Brenner*, 255 F.Supp. 410 (DCDC 1966). Even without a requirement to disclose criticality, the Applicant clearly sets forth the importance of the ozone range claimed in the subject application. See, for example, page 12, line 23 through page 15, line 6 in discussing the chemistry of the oxidation process and setting forth the amount of ozone needed for the desired balance of ferulic acid and vanillin levels. As stated in the specification, insufficient ozone can result in higher levels of ferulic acid remaining in the treated bran, while excessive ozone will drive the oxygenation process so far that desirable vanillin is destroyed. See pages 14 and 15 of the application. Therefore, the Applicant has disclosed the exact criticality requested by the Examiner and the prior art has no effective disclosure to this claimed amount of ozone.

Application Serial No. 10/005,052
Reply to Office Action dated February 5, 2007

On page 4 of the Office Action, the Examiner rejected claims 1-3, 5-21, 23-26, 33-34, 35-39, 41 and 48 under 35 U.S.C. § 102(e) as being anticipated by WO 02/21936A2 to Gonzalez et al. The Applicant continues to disagree as to the applicability of Gonzalez et al. Specifically, Gonzalez et al. is concerned with the bleaching of bran and does not address treating bran with a specified level of ozone to reduce a ferulic acid concentration while assuring an elevated concentration of vanillin. For at least this reason, the critical ozone range claimed and the distinguished results obtained contradict the perceived relevance of this prior art. Regardless, in order to further expedite prosecution, an affidavit under 37 C.F.R. § 1.132 is submitted herewith and should effectively remove WO 02/21936A2 as prior art. More specifically, evidence is hereby submitted that the inventors of the present application are also the only inventors of the subject matter disclosed in Gonzalez et al. and relied on by the Examiner in the § 102(e) rejection. See M.P.E.P. § 716.10.

The Examiner further rejected claims 22, 27-32, 40 and 42-47 under 35 U.S.C. § 103(a) as being unpatentable over WO 02/21936A2. The Applicant disagrees as to the application of WO 02/21936A2 as prior art, and notes that subject matter developed by another person which qualifies as prior art only under 35 U.S.C. § 102(e) shall not preclude patentability where the subject matter and the claimed invention were, at the time the claimed invention was made, owned by the same person or subject to an obligation of assignment to the same person. As WO 02/21936A2 is assigned to General Mills, Inc., and the present invention was subject to an assignment to General Mills, Inc. at the time it was invented, this reference cannot be properly applied under 35 U.S.C. § 103.

The Applicant submits that the present method for solving the problem of ferulic acid content in bran is novel and unobvious, as is the product produced thereby. Based on the above remarks and the enclosed 37 C.F.R. § 1.132 affidavit, allowance of the claims and passage of the application to issue are respectfully requested. If the Examiner should have any additional concerns regarding the allowance of this application, the

Application Serial No. 10/005,052
Reply to Office Action dated February 5, 2007

Examiner is cordially invited to contact the undersigned at the number provided below to further expedite the prosecution of the application.

Respectfully submitted,



Everett G. Diederiks, Jr.
Attorney for Applicant
Reg. No. 33,323

Date: July 5, 2007
DIEDERIKS & WHITE LAW, PLC
12471 Dillingham Square, #301
Woodbridge, VA 22192
Tel: (703) 583-8300
Fax: (703) 583-8301